

IN THE CLAIMS

Please amend the following claims:

1 1. (Amended Three Times) A method for document classification comprising:
2 analyzing textual content and graphical content of a previously unclassified
3 electronic document to determine a textual profile and a graphical profile of the
4 electronic document;
5 generating a classification of the document based on the textual profile and the
6 graphical profile; and
7 storing the electronic document in a pre-existing directory structure based
8 on the classification of the document and a document classification profile
9 associated with the pre-existing directory structure to resemble a classification
10 approach of the user.

1 2. The method defined in Claim 1 where the directory structure comprises a
2 hierarchy of documents mirroring in a similar fashion an organization in a pre-existing
3 memory storing documents.

1 3. The method defined in Claim 2 when the pre-existing memory comprises
2 a hard disk.

1 4. The method of claim 1, wherein analyzing textual content of an electronic
2 document comprises:

3 determining characteristic words of the document;
4 determining a frequency for each characteristic word; and
5 building a frequency table based on the frequency associated with each
6 characteristic word.

1 5. The method of claim 1, wherein analyzing graphical content of an
2 electronic document comprises:
3 determining a point set corresponding to the electronic document, wherein points
4 of the point set correspond to end points of lines;
5 determining a density of points within the point set;
6 generating a document profile based, at least in part, on the density of points
7 within the point set.

1 6. The method of claim 1, wherein generating a classification of the
2 document based on the textual and graphical properties comprises combining results from
3 the textual and graphical analysis using a Borda Count.

1 7. The method defined in Claim 1 further comprising building the pre-
2 existing directory structure by building hierarchy of documents based on a user's hard
3 drive.

1 8. The method defined in Claim 1 further comprising building the pre-
2 existing directory structure by extracting graphical and text features from documents in a

3 directory-based memory to obtain a document classification profile of each subdirectory
4 in the directory-based memory.

1 9. (Amended Three Times) A software product including a machine-readable
2 medium having stored thereon sequences of instructions, which, when executed by a
3 processor, cause the processor to:

4 analyze textual content and graphical content of a previously unclassified
5 electronic document to determine a textual profile and a graphical profile of the
6 electronic document;

7 generate a classification of the document based on the textual profile and the
8 graphical profile; and

9 store the electronic document in a pre-existing directory structure based on the
10 classification of the document and a document classification profile associated
11 with the pre-existing directory structure to resemble a classification approach of
12 the user.

1 10. The machine-readable medium of claim 9, wherein the sequences of
2 instructions that cause the processor to analyze textual content of an electronic document
3 further comprise sequences of instructions that cause the processor to:

4 determine characteristic words of the document;

5 determine a frequency for each characteristic word; and

6 build a frequency table based on the frequency associated with each characteristic
7 word.

1 11. The machine-readable medium of claim 9, wherein the sequences of
2 instructions that cause the processor to analyze graphical content of an electronic
3 document further comprise sequences of instructions that cause the processor to:
4 determine a point set corresponding to the electronic document, wherein points of
5 the point set correspond to end points of lines;
6 determine a density of points within the point set;
7 generate a document profile based, at least in part, on the density of points within
8 the point set.

1 12. The machine-readable medium of claim 9, wherein the sequences of
2 instructions that cause the processor to generate a classification of the document based on
3 the textual and graphical properties further comprises sequences of instructions that cause
4 the processor to combine results from the textual and graphical analysis using a Borda
5 Count.

1 13. (Amended Three Times) A method for document classification
2 comprising:
3 analyzing documents in a pre-existing document directory structure to determine a
4 document classification profile of the pre-existing document directory structure, the
5 document classification profile of the pre-existing document directory structure
6 indicating a classification approach of a user;
7 generating a mirror directory structure based on the pre-existing document
8 directory structure;
9 receiving a previously unclassified electronic document;

10 analyzing textual content and graphical content of the electronic document to
11 determine a textual profile and a graphical profile of the electronic document; and
12 placing the electronic document in the mirror directory structure based on the
13 document classification profile of the pre-existing document directory structure, the
14 textual profile of the document, and the graphical profile of the document to resemble the
15 classification approach of the user.

C/ 1 14. The method of claim 13, wherein analyzing the pre-existing document
2 directory structure further comprises:
3 recursively descending the pre-existing document directory structure;
4 generating a list of directories in the pre-existing document directory structure;
5 examining files in directories of the pre-existing document directory structure to
6 determine content; and
7 examining the content of the files to determine document classification profile of
8 the directories in the pre-existing document directory structure.

1 15. The method of claim 13 wherein the pre-existing document directory
2 structure is a hard disk directory structure.

1 16. The method of claim 13 wherein generating a mirror directory structure
2 based on the pre-existing document directory structure comprises generating a document
3 directory structure having a set of directories and relationships equivalent to the pre-
4 existing document directory structure.

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1 17. The method of claim 13 wherein placing the electronic document in the
2 mirror directory structure comprises:
3 determining a primary directory in the pre-existing document directory structure
4 in which the document should be placed based on the document classification profile of
5 the pre-existing document directory structure; and
6 storing the document in a primary corresponding directory in the mirror directory
7 structure that corresponds to the primary directory in the pre-existing document directory
8 structure.

C 1 18. The method of claim 17 further comprising:
2 determining a secondary directory in the pre-existing document directory in which
3 the document should be placed based on the document classification profile of the pre-
4 existing document directory structure; and
5 storing the document in a corresponding secondary directory in the mirror
6 directory structure that corresponds to the secondary directory in the pre-existing
7 document directory structure.

1 19. (Amended Three Times) A computer-readable medium having stored
2 thereon sequences of instructions which, when executed by a processor, cause the
3 processor to:
4 analyze a pre-existing document directory structure to determine a document
5 classification profile of the pre-existing document directory structure, the document
6 classification profile of the pre-existing document directory structure indicating a
7 classification approach of a user;

8 generate a mirror directory structure based on the pre-existing document directory
9 structure;
10 receive a previously unclassified electronic document;
11 analyze textual content and graphical content of the electronic document to
12 determine a textual profile and a graphical profile of entire electronic document; and
13 place the electronic document in the mirror directory structure based on
14 the document classification profile of the pre-existing document directory
15 structure, the textual profile of the document, and the graphical profile of the
16 document to resemble the classification approach of the user.

1 20. The computer-readable medium of claim 19, wherein the sequences of
2 instructions that cause the processor to analyze a pre-existing document directory
3 structure to determine an organization of the pre-existing document directory structure
4 further comprise sequences of instructions that cause the processor to:
5 recursively descending the pre-existing document directory structure;
6 generating a list of directories in the pre-existing document directory structure;
7 examining files in directories of the pre-existing document directory structure to
8 determine content; and
9 examining the content of the files to determine the organization of the directories
10 in the pre-existing document directory structure.

1 21. The computer-readable medium of claim 19, wherein the sequences of
2 instructions that cause the processor to generate a mirror directory structure further
3 comprise sequences of instructions that cause the processor to generate a document

4 directory structure having a set of directories and relationships equivalent to the pre-
5 existing document directory structure.

1 22. The computer-readable medium of claim 19, wherein the sequences of
2 instructions that cause the processor to place a document in the mirror directory structure
3 further comprise sequences of instructions that cause the processor to:

4 determine a primary directory in the pre-existing document directory structure in
5 which the document should be placed based on the document classification profile of the
6 pre-existing document directory structure; and

7 store the document in a primary corresponding directory in the mirror directory
8 structure that corresponds to the primary directory in the pre-existing document directory
9 structure.

1 23. The computer-readable medium of claim 22 further comprising sequences
2 of instructions that cause the processor to:

3 determine a secondary directory in the pre-existing document directory in which
4 the document should be placed based on the document classification profile of the pre-
5 existing document directory structure; and

6 store the document in a corresponding secondary directory in the mirror directory
7 structure that corresponds to the secondary directory in the pre-existing document
8 directory structure.

1 24. (Amended Three Times) An apparatus comprising:

2 means for analyzing a pre-existing document directory structure to determine
3 document classification profile of the pre-existing document directory structure, the
4 document classification profile of the pre-existing document directory structure
5 indicating a classification approach of a user;
6 means for generating a mirror directory structure based on the pre-existing
7 document directory structure;
8 means for receiving a previously unclassified electronic;
9 means for analyzing textual content and graphical content of the electronic
10 document to determine a textual profile and a graphical profile of the electronic
11 document; and
12 means for placing the electronic document in the mirror directory
13 structure based on the document classification profile of the pre-existing
14 document directory structure, the textual profile of the document, and the
15 graphical profile of the document to resemble the classification approach of the user.

1 25. The apparatus of claim 24, wherein means for analyzing the pre-existing
2 document directory structure further comprises:
3 means for recursively descending the pre-existing document directory structure;
4 means for generating a list of directories in the pre-existing document directory
5 structure;
6 means for examining files in directories of the pre-existing document directory
7 structure to determine content; and
8 means for examining the content of the files to determine document classification
9 profile of the directories in the pre-existing document directory structure.

1 26. The apparatus of claim 24, wherein means for generating a mirror
2 directory structure comprises means for generating a document directory structure having
3 a set of directories and relationships equivalent to the pre-existing document directory
4 structure.

1 27. The apparatus of claim 24, wherein means for placing a document in the
2 mirror directory structure comprises:

3 means for determining a primary directory in the pre-existing document directory
4 structure in which the document should be placed based on the document classification
5 profile of the pre-existing document directory structure; and

6 means for storing the document in a primary corresponding directory in the mirror
7 directory structure that corresponds to the primary directory in the pre-existing document
8 directory structure.

1 28. The apparatus of claim 27 further comprising:

2 means for determining a secondary directory in the pre-existing document
3 directory in which the document should be placed based on the document classification
4 profile of the pre-existing document directory structure; and

5 means for storing the document in a corresponding secondary directory in the
6 mirror directory structure that corresponds to the secondary directory in the pre-existing
7 document directory structure.

1 29. (Amended Three Times) A document processing system comprising:

2 a document scanning device;
3 a document storage device coupled to the document scanning device, wherein the
4 document storage device is organized as a document directory structure having multiple
5 directories, and further wherein the document storage device has a mirror directory
6 structure having multiple directories organized based on the document directory
7 structure; and
8 a processor coupled to the document scanning device and to the document storage
9 device, wherein the processor analyzes content of a document scanned by the document
10 scanning device, determines a directory in the mirror directory structure, in which the
11 document should be placed based on the analysis of document content and a document
12 classification profile of the document directory structure, to resemble the classification
13 approach of the user, and stores the document in the directory in the mirror directory
14 structure.

1 30. The document processing system of claim 29 wherein the processor is
2 operable to determine a secondary directory in the document directory structure in which
3 the document should be placed and to store the document in a corresponding secondary
4 directory in the mirror directory structure.

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2 31. (Amended Twice) The document processing system of claim 29 wherein
3 the processor analyzes files stored in the document directory structure to determine
4 content and generates the document classification profile of the document directory
5 structure based on the analysis.

32. The document processing system of claim 29 wherein the document is
analyzed based on image and textual content.